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| 10/582,189   | 06/08/2006  | Kasinath Nayak       | 4717                | 1602             |
| 23474 7590 07/27/2009<br>Clements Bernard PLLC<br>1901 Roxborough Road<br>Suite 250<br>Charlotte, NC 28211 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| THOMAS, BRENT C  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/582,189

**Applicant(s)**

NAYAK ET AL.

**Examiner**

BRENT THOMAS

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-12 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-12 and 15-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-US)  
Paper No(s)/Mail Date 06/08/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 06/03/2009 have been fully considered but they are not persuasive. With respect to applicant's argument that King does not disclose the amended ranges, King teaches a range that would render the claimed ranges obvious as explained in the rejection of claim 2 below.

2. With respect to applicant's argument that there is no basis that nucleating agents can be inorganic clarifiers, this is known in the art as shown in the following statement taken from a vendors website

"Nucleating agents that enhance the optical properties are referred to as clarifying agents or clarifiers.

Nucleants are additives which increase the crystallinity of the polymer, with the primary intent of improving mechanical properties."

(<http://www.specialchem4polymers.com/sf/ciba/index.aspx?id=clarifiers>, a printout is also attached with this office action)

Also Minami (col. 21 lines 14-42) teaches the inorganic clarifier of claim 19, but it is referred to as a nucleator (supporting the fact that nucleators act as clarifiers) and referred to by its trade name NA-11. Clarifiers are also disclosed in King, however they are organic sorbitol based clarifiers. Therefore, King teaches or suggests using clarifiers. Minami was utilized to supply limitation of inorganic clarifier.

3. In response to applicant's argument that Scott is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if

not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Scott deals with the manufacture of articles from polypropylene as does King. Therefore the disclosures of the prior art of record are in the same field of endeavor. In addition, the examiner's reasons for combining prior art do not have to be the same reasons as applicants.

### ***Claim Rejections - 35 USC § 103***

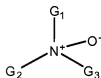
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

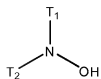
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2-4, 6-11, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al. (U.S. Pg Pub 2002/0086924 A1 hereafter King).
7. With regard to claims 2 and 10, King (paragraphs 1-22, 35-38, and 43-46) teaches a polyolefin article of manufacture including blend useful as an additive in polyolefin polymers for minimizing the effects of radiation on the physical properties of said polymers, which comprises a hindered amine light stabilizer and at least one material selected from the group consisting of: i) amine oxides exemplified by the formula:



in which G1 and G2 are independently a straight or branched chain alkyl of 6 to 36 carbon atoms, aryl of 6 to 12 carbon atoms, aralkyl of 7 to 36 carbon atoms, alkaryl of 7 to 36 carbon atoms, cycloalkyl of 5 to 36 carbon atoms, alkycycloalkyl of 6 to 36 carbon atoms or cycloalkylalkyl of 6 to 36 carbon atoms;

G3 is a straight or branched chain alkyl of 1 to 36 carbon atoms, aryl of 6 to 12 carbon atoms, aralkyl of 7 to 36 carbon atoms, alkaryl of 7 to 36 carbon atoms, cycloalkyl of 5 to 36 carbon atoms, alkycycloalkyl of 6 to 36 carbon atoms or cycloalkylalkyl of 6 to 36 carbon atoms; with the proviso that at least one of G1, G2 and G3 contains a 13 carbon-hydrogen bond; and ii) hydroxylamines exemplified by the formula:



in which T1 is a straight or branched chain alkyl of 1 to 36 carbon atoms, cycloalkyl of 5 to 12 carbon atoms, aralkyl of 7 to 9 carbon atoms, or said aralkyl substituted by one or two alkyl of 1 to 12 carbon atoms or by one or two halogen atoms and T2 can be either H or have the same meaning as T1.

King further teaches hindered amine light stabilizers in a range of .01% to 10% which reads on the claimed range [0034] and a combination of hydroxylamine and amine oxides (component b) [0017-0020] in a range of .01% to 0.5% [0060].

King does not teach the ranges of the hydroxylamine and amine oxides separately, however, King teaches that the total amount of component b is in a range of .01% to 0.5% [0060]. King also clearly teaches that component b can comprise mixture of at least two, which encompasses mixture of both hydroxyl amine and amine oxide. A 1:1 ratio is an obvious modification, as long as the total amount of the stabilizers does not exceed to amount disclosed in King which would yield .005% to 0.25% of hydroxylamine and amine oxide. Therefore the amount of 0.01% to 0.2 % for hydroxylamine and 0.01% to 0.1% amine oxide is clearly envisaged.

8. With regard to claim 3, King (paragraph 142) teaches an olefin polymer selected from propylene homopolymers, propylene co-polymers, ethylene homopolymers, and ethylene co-polymers.

9. With regard to claim 4, King (paragraph 163) teaches Millad®3988 (a sorbitol-based clarifier, see attached product spec.) present in the amount of 2200 ppm, which is in the middle of the claimed range.

10. With regard to claim 6, King (paragraph 143, 145, 146) teaches inorganic nucleators present in any amount between .01 % and 10 % by weight which is equivalent to 100 to 100,000 ppm by weight, which encompasses the claimed range.

11. With regard to claim 7, King (paragraphs 34, 60) teaches amine oxide from .01 % to .5 % by weight and hindered amine light stabilizer from .01 to 1% by weight. This would yield a ratio of amine oxide to hindered amine light stabilizer of 1:0.01 to 1:5, which encompasses the claimed range.

12. With regard to claim 8, King (paragraphs 34, 60) teaches hydroxyl amines from .01 % to .5 % by weight and hindered amine light stabilizers from .01 to 1% by weight. This would yield a ratio of hydroxyl amine to hindered amine light stabilizer of 1:0.01 to 1:5, which encompasses the claimed range.

13. With regard to claims 9 and 16, King (paragraphs 143 and 145) lists acid scavengers (also know as neutralizers), including metallic stearates and hydrotalcites, as additives that can further comprise the composition.

14. With regard to claim 11, King (paragraphs 15-23) teaches a sterilized article of manufacture exposed to gamma radiation.

15. With regard to claim 15, King (paragraphs 34, 60, and 122) teach different components of the blend in weight percent ranges (0.1% to 1%, 0.01% to 0.5%, and 0.05% to 0.5%), that add up to 0.16% to 2% by weight, which is equivalent to 1,600 to 20,000 ppm by weight. This overlaps the claimed range and it would have been obvious to one of ordinary skill in the art at the time the invention was made to so

include as one would have expected them to have the same properties, absent a showing to the contrary.

16. With regard to claim 17, King (paragraph 132) lists example articles of manufacture including syringes and labware.

17. With regard to claim 18, King (paragraph 134) teaches exposing a polyolefin article to .5 to 10 megarads of gamma radiation. This encompasses the claimed range and it would have been obvious to one of ordinary skill in the art at the time the invention was made to so include as one would have expected them to have the same properties, absent a showing to the contrary.

18. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over King as applied to claim 2 above, and further in view of Minami et al. (U.S. patent 6,734,270 B1 hereafter Minami).

19. With regard to claims 5 and 19, King (paragraph 162) teaches a clarifier present in the amount of 2200 ppm.

20. King does not teach the type of clarifier used.

21. In the same field of endeavor, Minami (col. 21 lines 14-42) teaches inorganic nucleating agents (which can also be used as clarifiers) including NA-11 which is the trade name for sodium 2,2'-methylene-bis-(4,6-di-tert-butylphenyl) phosphate as shown in Zhao et al (US pg pub 2003/0008956 A1) paragraph [0006].



22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to try inorganic clarifiers for the benefit of reducing the odor from the clarifier (Minami col. 21 lines 14-15).

23. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over King as applied to claim 11 above, and further in view of Scott et al. (U.S. patent 6,333,382 B1 hereafter Scott).

24. With regard to claim 12, King (paragraph 141) teaches an article made of co-polymers of propylene and ethylene. King is silent on the weight percentage of ethylene in the copolymer.

25. In the same field of endeavor (polypropylene articles), Scott (col. 1 lines 9-11) teaches random co-polymers of propylene and ethylene, which random co-polymers contain between 0.5% to about 6% of ethylene by weight.

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the article of King with the co-polymers of propylene and ethylene from Scott for the benefit of improved clarity (Scott col. 1 lines 11-13).

### ***Conclusion***

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT THOMAS whose telephone number is (571)270-7737. The examiner can normally be reached on Monday - Thursday, 9:00am-6:00pm (est.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PATRICK RYAN can be reached on (571)272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BT

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795